

as broad at the apex as long, longitudinally striated, with a distinct median carina, and two longitudinal carinæ on the sides, the space between the latter increasing in breadth towards the apex and covered with close-lying yellowish-white hairs. The male has the four basal tergites rugose.

*Hab.* The East Coast of Australia as far north as Townsville, and inland as far as Hermannsburg, Northern Territory.

The South-American genus *Binarea* has a single spine on the pronotum and has the radial cell of the hind wing divided, the sculpture is also very different.

*A. morleyi* was submitted by Froggatt to C. Morley before description, and placed in *Iphiaulax* on his authority.

#### GENUS SYNGASTER, Brullé.

Brullé described two species from Australia, *S. lepida* and *S. annulicornis*. The former is a fairly common species in S.E. Australia and Tasmania, and ranges as far north as Townsville. The white median segment and first tergite are very conspicuous. In the typical form the legs are black, but a variety taken by Mr. Froggatt at Narrabeen, N.S.W., has the femora, tibiæ, and tarsi red. I have not seen specimens of *S. annulicornis*, and am doubtful if it belongs to the same genus.

Doubtless other genera of Doryctinæ will be recorded from Australia when larger collections are available.

#### VIII.—Further Notes on the Asilidæ of Australia.

By GERTRUDE RICARDO.

FROM small collections of Asilidæ sent me by Mr. C. Gibbons and Mr. Frank Taylor for identification the following descriptions of new species and notes on old species are taken, with the addition of any new material in the Brit. Mus. Coll. The types are almost all presented to the Brit. Mus. Coll. by the kindness of the two above-named gentlemen.

#### DASYPOGONINÆ.

*Bathypogon testaceovittatus*, ♂ ♀, Macq. Dipt. Exot., Suppl. v. p. 70, pl. ii. fig. 1 (*Dasygogon*).

Two females from Sydney (*C. Gibbons*) I believe belong to the above species.

These females agree with the description with the exception of the bristles on the tarsi, which are black, not white as stated by Macquart, but the rounded angle of the anterior branch of the fourth vein emitted from the discal cell is present, though not quite so exaggerated as given in the figure; the white hairs below the first two joints of the antennæ are here more reddish and black. *Forehead* with black bristly hairs. *Thorax* with white tomentum on the testaceous sides. Præsutural bristles three in number—one supraalar, two postalar,—all black, and three or four weak dorso-central bristles on each side, pubescence on dorsum black and numerous. *Scutellum* brown, with grey tomentum and four black bristles on its posterior border. *Abdomen* with two black bristles on each side of the first segment; dorsum with short white pubescence, and the usual circle of spines at apex. *Femora* and *tibiæ* with short white pubescence also present on the first joint of the tarsi and partly on the other joints; all the legs with numerous black bristles.

*Bathypogon brachypterus*, Macq. Dipt. Exot. i. pt. 2, p. 160, pl. iii. fig. 3 [*Dasyopogon*] (1838); id. Suppl. ii. p. 50 [*Dasyopogon*] (1846); Ricardo, Ann. & Mag. Nat. Hist. (8) ix. pp. 151, 152 (1913).

A male and female from Queensland and a female from Sydney have a good many black bristles on the legs, and the four bristles on the scutellum are black, not yellow. Others from Queensland have the pale colour of the legs more yellow than red, and are smaller in size.

This appears to be a rather variable species, differing in size and general appearance.

#### NEODIOCTRIA, gen. nov.

Established for one species from Sydney which has a superficial resemblance to *Dioctria alandica*, of Europe, but is at once distinguished by the shape of the antennæ, which are not situated on a projection, and the first two joints are almost equal in length, in other respects the characteristics of the genus are very similiar to those of *Dioctria*, the *abdomen* is slender. *Wings* large. *Legs* slender and nearly bare. *Scutellum* with no bristles, moustache on face almost confined to the oral margin.

*Neodictria australis*, ♂ ♀, sp. n.

Type (male) from Sydney in Gibbons Coll.

Type (female) in Brit. Mus. Coll. from Australia, and other males and females in Gibbons Coll., all from Sydney.

A handsome reddish-yellow species with large black spots on the *thorax* and the *abdomen*. *Legs* reddish yellow, the hind pair largely black. *Wings* blackish.

Length, ♂ 15-20, ♀ 15-20 mm.

*Male*.—*Face* brownish, covered with golden-yellow tomentum; moustache consists of yellow bristly hairs round the oral margin and continued above, but not reaching the middle of the face. Beard golden yellow. *Palpi* black, with black hairs and a few reddish ones at apex. *Antennæ* black, longer than the head (depth), the first two joints similar in shape, and almost the same length, with black hairs and bristles below, the third joint longer than the first two joints together, with a short obtuse spine at apex. *Fore-head* black, with a few black hairs. Hind part of head bordered with strong reddish-yellow bristles, collar also with same-coloured longer bristles. *Thorax* reddish yellow, the large black spot covering almost all the dorsum produced anteriorly, so that the shoulders are reddish yellow; there are three præsutural reddish-yellow bristles and two similar supraalar bristles; dorsum almost bare; a few short black hairs are discernible on the median line, on shoulders, and at sides; breast-sides bright reddish yellow, with some yellow tomentum. *Scutellum* same colour, bare, with a very few short black hairs on dorsum. *Abdomen* with a large oblong black spot on each segment forming a stripe, though each spot has rounded angles posteriorly, and the first segment is almost entirely black, its posterior border being reddish yellow at the sides only; underside almost entirely pale yellow. *Genitalia* small, with black hairs and a few short yellow ones. *Legs* reddish yellow, the hind femora black except at their extreme base, and the hind tibiæ black on the apical two-thirds; tarsi except the first joint chiefly black: the femora are slightly incrassate, bare, with some very short black pubescence; all the tibiæ with reddish-yellow stout bristles and black short pubescence; the tarsi with the same bristles, the hind pair with some black ones. *Wings* blackish grey, veins black, all the cells open, the fourth slightly narrower at border and the anal cell very narrow at border, the small transverse vein at the middle of the discal cell.

*Female* identical, the præsutural bristles one less in number

and the supraalar apparently one more in number; the seventh segment of *abdomen* is entirely yellowish in the type only, the last segment greyish yellow with a fringe of red short spines. The hind tibiae are only black on the apical third in the type only; the small transverse vein of wing is beyond the middle of the discal cell. *Wings* in both sexes with very small alulae, as in species of *Dioctria*.

*Neosaropogon nigrinus*, ♂, sp. n.

Type (male) and three other males from Kuranda, Queensland (*F. P. Dodd*), and two in Mr. Taylor's Coll. from Queensland.

A handsome species, nearly allied to *N. claripennis*, Ricardo, but distinguished by the darker abdomen, antennae, and tarsi.

Length 18 mm.

*Face* covered with golden-yellow tomentum. Moustache composed of long stout yellowish bristles round the oral opening. *Palpi* black with black pubescence. Beard yellowish. *Antennae* blackish, the third joint nearly three times as long as the first two joints together, ending in an obtuse knob on its lower border at apex. *Forehead* same as face, with black hairs at sides and on ocelligerous tubercle; bristles at vertex round head are black, then yellowish hairs. *Thorax* blackish, the shoulders and sides covered with yellow tomentum, sides with black hairs. Præsutural bristles two in number, stout and long; two supraalar and two postalar bristles, two very stout long dorso-central bristles, and a few short finer ones intermixed; dorsum of thorax nearly bare, a few fulvous hairs are discernible. *Scutellum* with two black bristles, covered with yellow tomentum. *Abdomen* long and slender, blackish, with dull fulvous spots on the sides, and the last three segments are almost wholly reddish yellow; genitalia rather large, black above and reddish yellow below, with long yellowish tuft-like hairs; dorsum with very fine yellowish pubescence, not at all prominent, sides of first segment with yellow hairs and three or four usually reddish bristles; underside of abdomen dark. *Legs* reddish yellow, the fore femora with a broad black stripe on their upper sides, the others with a less well-marked dark stripe; tibiae bright yellow with black apices, and all the tarsi black; femora with long yellow hairs below and short black pubescence on dorsum; tibiae with fringes of yellow hairs at sides and on the pale parts and black pubescence at apex, and

armed with fairly numerous black bristles; tarsi with stout black bristles. *Wings* as long as the abdomen, clear, pale yellowish at the extreme base; veins brown, the first vein from the discal cell bulges moderately into the first posterior cell; the small transverse vein is on the apical third of the discal cell; fourth posterior cell open but very narrow at the border, anal cell the same.

LAPHIRINÆ.

*Nusa queenslandi*, ♂, sp. n.

Type (male) from Stannary Hills, N. Queensland, circa 3000 feet (*Dr. T. L. Bancroft*), 1909, 145.

The only species of this genus recorded from Australia is *N. tectamus*, Wlk., a large species distinguished by the grey hairs at base of abdomen. This is a blue-black shining species considerably smaller, and the abdomen is bare. Legs with white and black pubescence.

Length 16 mm.

*Face* black, with white tomentum at sides. Moustache consists of stout black bristles, with long white hairs below and white hairs at sides of face. *Palpi* black, with some short reddish hairs at apex. *Antennæ* blackish brown, the first two joints with black hairs below and a strong black bristle on underside of the second joint. *Forehead* with black bristles on the central tubercle and whitish hairs at sides and round head, and one black bristle each side. *Prothorax* armed with a circlet of black bristles. *Thorax* with some sparse black pubescence, shoulders greyish white. *Scutellum* the same, with a fringe of weak black bristles on its posterior border. *Abdomen* with a white spot at the side of the second, third, and fourth segments, two stout black bristles on side of second segment, and one on nearly all the remaining segments, with black hairs at sides and white ones on the pale spots. *Genitalia* prominent, with black and yellow hairs. *Legs* blackish, with black pubescence, the femora with some white hairs, the tibiæ with chiefly white hairs and with black bristles, the tarsi armed with numerous strong black bristles. *Wings* brownish, paler on posterior border, the first posterior cell closed near the border, fourth and anal cell also closed.

A female or male from Eidswold, Queensland, though much smaller (only measuring 12 mm.), appears to be identical with this male, though the white pubescence on the legs

is not so marked; the end-segment of abdomen being destroyed, it is not possible to determine the sex; the first posterior cell of wing is very narrow, but not absolutely closed.

*ASILINÆ.*

*Dysmachus rudis*, Walker, List Dipt. vii., Suppl. 3, p. 737, 254 (1855) [*Asilus*]; Ricardo, Ann. & Mag. Nat. Hist. (8) xi. p. 422 (1911); White, R. S. Tasmania, p. 172 (1916).

This has been placed in a new genus *Trichoitamus* by the late Mr. A. White, who draws attention to the difference in the ovipositor from *Dysmachus*, the lamellæ being free, not wedged in as in the last-named genus. Owing to the War, Mr. White's paper has not yet been forwarded to this country, but owing to his brother's kindness I have had the MS. to study.

Mr. Gibbons sent me males and females of this species from Sydney. These differ somewhat from the type in the colour of the legs, which are darker, the tibiæ only dull red at the base, not reddish yellow on the basal two-thirds, and the first joint of tarsi is black, not yellow; the whole insect is darker than Walker's type. The female has a short ovipositor, not including the seventh segment, though it is much compressed laterally.

In the Brit. Mus. Coll. a female from Mangalore, Tasmania, presented by A. White, has the legs very similar to those of the type, and the moustache has white hairs below the black ones; in the specimens from Sydney the moustache is wholly black.

*Cerdistus australis*, ♂ ♀, sp. n.

Type (male) and two other males, type (female); all from Sydney. In Mr. Gibbons's Coll.

A small black species distinguished from *Cerdistus maricus*, Wlk., and *Cerdistus sydneyensis*, Schiner, by the entirely black legs in the males. Schiner's species has the wings tinged with grey, which does not appear in this species.

Length 13 mm.

*Male*.—Face blackish brown, with a little white tomentum at sides and below. Tubercle small, with moustache composed of black bristles and some white ones below. Beard

white. *Antennæ* blackish, the first two joints with black hairs. *Forehead* with black hairs. *Thorax* brownish, with grey tomentum and with black stripes, the median one broad, the side ones shorter; dorsum covered with short black hairs and long black bristles posteriorly, one or two are white. *Scutellum* with two white bristles on its outer border. *Abdomen* black, with grey segmentations, those on the second and third segments broadest; pubescence on dorsum black, hairs at sides white and black with white and black bristles; genitalia black, with black hairs and long black bristles. *Legs* black, the fore femora with long white pubescence and bristly white hairs, the middle and hind pair with shorter white pubescence and bristles; fore tibiæ with two long black bristles on outer side and other black and white shorter bristles; pubescence white, rufous on the inside, middle and hind pair with white and black bristles; tarsi with black bristles only. *Wings* clear, small vein beyond the middle of discal cell.

*Female* is identical, but the fore and middle tibiæ are obscurely reddish, and the white bristles of the moustache are rather more numerous; ovipositor nearly as long as the last two segments together.

*Cerdistus sydneyensis*, Schiner, 'Novara' Reise, Dipt. p. 187 (1868).

One male and one female from Sydney, in Mr. Gibbons's Coll.

One male from Hornsby, in Mr. Gibbons's Coll.

This is a small species distinguished by the reddish-yellow bases of tibiæ and femora; the bristles on the legs are largely white, most numerous on the underside of the hind femora; the two bristles on margin of scutellum are black, the bristles on sides of abdomen black.

The type was described as from Sydney.

*Cerdistus maricus*, Walker, Insecta Saunders, Dipt. i. p. 141 (1851); id. List Dipt. Brit. Mus. vii., Suppl. 3, p. 735 (1855); Ricardo, Ann. & Mag. Nat. Hist. (8) xi. p. 436 (1913).

In my description of the above the two weak yellow long bristles on scutellum are present on the specimen from Queensland (a female); in the type (a male) they are black. Another female in Mr. Gibbons's Coll. from Sydney has them yellow.

*Neoitamus gibbonsi*, ♂ ♀, sp. n.

Type (male) in Brit. Mus. Coll., presented by C. Gibbons, 20. 2. 16, from Sydney.

Type (female) from Sydney, and other males and females from the same place and by the same collector.

This species will not belong strictly to this genus, as the ovipositor of the female, though long, does not include the sixth or seventh segment; but, as remarked by the late Mr. Arthur White in his last paper, species from Australia placed in this genus are many of them not typical and may require later to be removed to a new genus peculiar to Australia.

It is a large species nearly allied to my *Neoitamus hyalipennis*, but distinguished from it by the ovipositor not including the seventh segment, by the moustache being wholly black, and the base of the hind femora more or less reddish yellow.

Length, ♂ 16-17, ♀ 18-24 mm.

*Male*.—*Face* with a very large tubercle, blackish with pale tomentum, thickest at the sides. Moustache composed of many short black bristles. *Palpi* black, with white hairs. Beard white. *Antennæ* black, the first two joints and the forehead with black bristly hairs. *Thorax* with the usual stripes very distinct, the middle one not divided and the side ones continued from the anterior border to the posterior border; the præsutural, supraalar, and postalar bristles each two in number; dorso-central bristles numerous, some stout and some hair-like, with short black hairs continued to anterior border rather *Dysmachus*-like. *Scutellum* with at least two stout black bristles, intermixed with finer hair-like ones which also cover the dorsum. *Abdomen* blackish, with some grey tomentum, and the segmentations grey; sides grey; the pubescence on dorsum is thick and black, but short, sides with white hairs. Genitalia long and narrow, longer than the last two segments together, shining black, with short black hairs. *Legs* black, the hind femora reddish at their extreme base, in some of the specimens this colour is extended; the tibiæ reddish yellow for two-thirds of their length; fore femora with long black and white hairs above and below, the others with short black pubescence and black bristles; tibiæ and tarsi with black bristles. *Wings* clear, the small transverse vein almost in the middle of the discal cell, which is very narrow.

*Female* identical. The ovipositor, though not including



the seventh segment, is very long, almost the length of the last four segments.

A male and female from Tasmania seem to belong to this species; the male has some white hairs in the moustache.

*Neoitamus australis*, ♂ ♀, sp. n.

Type (male) and another, type (female) and another; all from Sydney (*C. Gibbons*).

A small species, distinguished from *Neoitamus varius*, Wlk., by the white bristles on thorax and by its lighter colouring. *Legs* reddish yellow, with black streaks. Moustache pale yellow.

Length, ♂ 10-11, ♀ 14 mm.

*Male*.—*Face* covered with silky yellow tomentum, tubercle very small. Moustache composed of long bristle-like yellow hairs. *Antennæ* blackish brown. Postocular bristles pale. *Thorax* covered with yellowish-grey tomentum, the stripes dark blackish brown, the median one broad, not divided, but becoming narrower posteriorly. The præsutural bristles two in number (one black, one white), one supraalar, one postalar, both long and white in colour; dorso-central bristles weak, white, four in number; pubescence on dorsum scanty, black; a median line of hairs from the anterior border extends beyond the suture composed of short but distinct hairs. *Scutellum* with two long white bristles on its margin. *Abdomen* covered with grey tomentum and with a large black spot on each segment; a long yellowish bristle at the side of most of the segments, three longer ones between the fourth and the fifth segments, and yellow hairs intermixed; pubescence on dorsum short, white. Genitalia large, black, with black pubescence. *Legs* long, slender, the coxæ black, the femora reddish yellow on their basal halves with the exception of the hind pair, which are black at their extreme base; only the middle and posterior ones have black bristles, and then only few in number; all have some soft hairs below; tibiæ reddish yellow, black at their apices, the tarsi on their anterior joints reddish, then black; tibiæ and tarsi with black bristles. *Wings* grey, the small transverse vein beyond the middle of the discal cell.

*Female* similar. Ovipositor includes only the seventh segment, as in *Neoitamus varius*, which does not include the sixth as stated by me in the *Ann. & Mag. Nat. Hist.* (8) xi. p. 432(1913), and in both species the seventh is only included in a modified degree.

This species will belong to the late Mr. White's subgenus *Ann. & Mag. N. Hist.* Ser. 9. Vol. i. 5

*Rhabdotoitamus*, formed by him for species of *Neoitamus* with the femora striped or partly yellow.

*Ommatius distinctus*, ♂ ♀, sp. n.

Male (type) in Brit. Mus. Coll. from Townsville, Queensland (*F. P. Dodd*), 1904, 284; another in Mr. Gibbons's Coll. from Eidswold, Queensland; another from Kuranda, Queensland (*F. P. Dodd*), in Mr. Taylor's Coll.; and a female (type).

A species distinguished in the male by the dilated wing and by the brown spot on apex of wing, which is absent in the female. Moustache black and white. *Legs* yellowish, with black stripes.

Length, ♂ 13-14, ♀ 13 mm.

*Male*.—*Face* with a fairly large tubercle, not, however, very prominent, covered with whitish tomentum. Moustache composed of whitish long bristly hairs and two long black bristles above; in one male there are four of these. Beard whitish. *Antennæ* dull brown, the feathered arista twice as long as the antennæ themselves. Hind part of head with white bristles and white hairs below. *Thorax* blackish blue with grey tomentum; two præsutural bristles, one supraalar bristle, and one postalar bristle, nearly all white; the dorso-central bristles chiefly white; the dorsum almost bare of pubescence. *Scutellum* the same colouring, with two white bristles. *Abdomen* blackish, with grey tomentum and some grey hairs; sides with longer grey hairs. Genitalia rather stout and prominent, black. *Legs* yellowish red, with black stripes on the upper sides of the fore and middle femora, the hind pair with the apical half only, black above; the hind tibiæ black at apex; the last four joints of all the tarsi dusky; the femora all incrassate, the middle pair with noticeable black bristles, the hind pair with four or more white ones, the hind and fore pairs with long fine white hairs below; the fore tibiæ with the same, and the others with shorter white pubescence; the bristles on the legs almost entirely black. *Wings* clear, the anterior border very much dilated in the middle, the veins coalescing and forming a black thick border; the brown spot is at the extreme apex, reaching across the anterior branch of the third vein; the small transverse vein is this side of the middle of the discal cell.

*Female* seems identical, but the black bristles on moustache are more numerous and those on the thorax are largely black, those on the middle tibiæ white. *Wings* at apex are very faintly grey.